DOCUMENT RESUME

ED 458 510 CG 031 401

AUTHOR Selden, J. J.; Pospisil, T. S.; Devaraju-Backhaus, S.; Bradley, J.; Michael, D. D.; Golden, C. J.

TITLE An Examination of the Constructs Measured by Parent Behavioral Reports.

PUB DATE 2001-08-00

NOTE 9p.; Paper presented at the Annual Conference of the American Psychological Association (109th, San Francisco, CA, August 24-28, 2001).

PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Attention Deficit Disorders; *Children; Counseling; Evaluation Problems; Measures (Individuals); Parents; Personality Assessment; *Psychological Services; *Psychological Testing; *Redundancy; *Test Interpretation; Testing Problems

IDENTIFIERS Child Behavior Checklist; Personality Inventory for Children

ABSTRACT

Parents are often asked to complete behavioral checklists and personality inventories regarding their children when they bring them in for psychotherapy or neuropsychological testing. The Child Behavior Checklist (CBCL), the Conners' Parent Report Scale (CPRS), and the Personality Inventory for Children (PIC) are frequently used tests. Some research has raised doubts about the extent to which the content of these measures is redundant. Knowing the degree to which they do overlap might allow clinicians to administer only one or two of the tests. If the tests measure similar constructs, consistent parental support for them would strengthen the diagnostic hypotheses. Analysis was performed on the CBCL, the CPRS, and the PIC for parents (N=46) of children with ADHD. Clinical implications are discussed. The study uncovered common factors within the PIC, CBCL, and CPRS, however, while integrating the three instruments, they were not as consistent as expected. A greater understanding of the true meaning of these behavior rating scales would be beneficial to clinicians. (JDM)

An Examination of the constructs Measured by Parent Behavioral Reports

by
J.J. Selden
T.S. Pospisil
S. Devaraju-Backhaus
J. Bradley
D.D. Michael
C.J. Golden

An Examination of the Constructs Measured by Parent Behavioral Reports

Selden, J.J., Pospisil, T.S., Devaraju-Backhaus, S., Bradley, J., Michael, D.D., and Golden, C.J.
Nova Southeastern University, Ft. Lauderdale, Florida

Oftentimes, when bringing their children for psychotherapy or neuropsychological testing, parents are asked to complete behavioral checklists and personality inventories regarding their children. Numerous parental report measures are available to those wishing to examine a child's behavior, including the Child Behavior Checklist, the Conners' Parent Report Scale, and the Personality Inventory for Children. Some research has raised doubts about the extent to which the content of these measures is redundant. Knowing the degree to which they overlap might allow clinicians to administer only one or two of them, rather than all three. Also, if the tests measure similar constructs, consistent parental report across them might strengthen diagnostic hypotheses. Therefore, a factor analysis of the CBCL, CPRS, and PIC was performed. Subjects were 46 parents of children diagnosed with ADHD. The children had a mean age of 10.35 and an average education of 4.80. Eighty-four point eight percent were male, 88.6% were Caucasian, and 97.8% were right-handed. Five factors (Acting Out, Withdrawn, Social Relations, Academic, and Fidgetiness and Physical Discomfort) accounted for 69.7% of the total explained variance. Clinical implications are discussed.

Oftentimes, when bringing their children for psychotherapy or neuropsychological testing, parents are asked to complete behavioral checklists and personality inventories regarding their children. From these parental reports, clinicians gain rich information about a child's functioning outside the clinical setting. This information is integral to case conceptualization, diagnostic formulations, and treatment recommendations in a variety of settings.

Numerous parental report measures are available to those wishing to examine a child's real-world behavior. Some of the more common such instruments are the Achenbach Child Behavior Checklist (CBCL; Achenbach, 1992), the Conners' Parent Rating Scale (CPRS), and the Personality Inventory for Children (PIC; Wirt, Lachar, Klinedinst, & Seat, 1990). Each of these tools generates multiple scales. Within each of these parental report devices, each scale is touted to measure distinct aspects of a child's behavior, psychological functioning, or personality.

The CBCL produces 11 narrow-band scales (Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behaviors, Aggressive Behaviors, Activities, Social, and School) and two broad-band factors (Internalization and Externalization). The CPRS yields six behavioral scales: Conduct, Learning, Psychopathology, Impulsivity, Anxiety, and Hyperactivity. The PIC is comprised of four broad factors (Undisciplined/Poor Self-Control, Social Incompetence, Internalization/ Somatic Symptoms, and Cognitive Development), and 14 clinical scales (Defensiveness, Adjustment, Achievement, Intellectual Screening, Development, Somatic Concern, Depression, Family Relations, Delinquency, Withdrawal, Anxiety, Psychosis, Hyperactivity, and Social Skills). Reviewing the names of the scales suggests that there is some overlap across the measures (e.g., Hyperactivity appears on both the CPRS and the PIC).

However, some research has raised questions about the extent to which the content of these measures is truly redundant. For example, Jensen, Larrieu, and Mack (1997) found that the PIC was effective at making a differential diagnosis between Attention Deficit/Hyperactivity Disorder (ADHD) and Pervasive Developmental Disorder Not Otherwise Specified (PDD NOS), while the CPRS was not. This implies that the PIC might look at different subtleties than does the CPRS.

Other research has studied the Conners' Teacher Rating Scale (CTRS) and has found that several of the clinical scales load on a common "hyperactivity" factor (Trites & Laprade, 1983).

This posits the question "do clinical scales from the CPRS load on a shared factor as well?" Virtually no studies exploring the interrelationships within the CPRS, and even fewer comparing relationships across the CPRS, the CBCL, and the PIC, exist in the literature.

Furthermore, completing all three measures is time-consuming for parents. Knowing the degree to which the CBCL, CPRS, and PIC overlap might allow clinicians to administer only one or two of them, rather than all three. Alternately, if the three tests are determined to measure similar constructs, consistent parental report across the tests might strengthen diagnostic hypotheses. For the above reasons, 37 scales from the CBCL, CPRS, and PIC were analyzed to explore common constructs.

Method

Subjects. Participants were 46 parents of children who had been referred for neuropsychological evaluation to assess the presence of ADHD. Average age of the children represented in the sample was 10.35 (SD=1.34), and average education was 4.80 (SD=1.42). The sample was 84.8% male and 97.8% right-handed. They were 88.6% Caucasian, 9.1% Hispanic, and 2.3% African-American.

Assessment Instruments. Parents were asked to complete the CBCL, the CPRS, and the PIC in regard to their children who had been referred for testing. The three parent reports produce T-scores for each scale. Higher scores represent endorsement of more problems.

Results and Discussion

A principal components factor analysis with varimax rotation was performed on the 11 clinical and two broadband scales from the CBCL, the six clinical scales from the CPRS, and the 14 clinical scales and four factor scales from the PIC. This analysis manifested five factors with eigenvalues greater than one. They accounted for 69.7% of the total explained variance in our ADHD sample. These five factors and their loadings are displayed in Table 1.

The first factor was labeled "acting out." Scales loading on this factor related to externalized behavior problems, including Delinquency (CBCL and PIC), Hyperactivity (PIC and CPRS), Aggression (CBCL), and Conduct Problems (CPRS), among others. Factor II was best defined as "withdrawn." Here, scales pertaining to Anxiety (CBCL and PIC), Somatic Complaints (CBCL and PIC), and Internalization (CBCL and PIC) were heavily represented, as were Thought Problems, Attention, and Withdrawn (CBCL).

The third factor was likened to a "social relations" component. Scales loading on this factor included Social Incompetence, Social Skills, Withdrawal, Psychosis, and Depression (PIC), Social and Social Problems (CBCL), and Anxiety (CPRS). Factor IV was best described as "academic," with Development, Cognitive Development, Achievement, and Intellectual Screening (PIC), School (CBCL), and Learning Problems (CPRS) all loading on it. The fifth and final factor represented "fidgetiness and physical discomfort." It encompassed only CPRS scales—Psychosomatic and Impulsive-Hyperactivity.

Although each of the three parent behavioral reports purports to measure no fewer than six clinical scales, in reality all 37 scales analyzed in our study can be represented along only five factors: Acting Out, Withdrawn, Social Relations, Academic Problems, and Fidgetiness/Physical Discomfort. We found redundancy not only across the CBCL, CPRS, and PIC, but also within each of them. For instance, six of 13 scores from the CBCL loaded on Withdrawn (redundancy within the CBCL), and separate anxiety and somatization scales from both the CBCL and PIC loaded on it as well (redundancy across these two tests).

Results also revealed that no scales from the CPRS loaded on the Withdrawn factor. This implies that when a clinician suspects depression or some other isolative condition, the CPRS might not be an appropriate tool, for it does not examine internalization thoroughly. Several of the CPRS scales (e.g., Anxiety and Psychosomatic) as well do not load with their predicted counterparts (the

PIC's and CBCL's Anxiety and Somatization scales), suggesting the CPRS's items are organized idiosyncratically.

The PIC was adequately represented across the Acting Out, Withdrawn, Social Relations, and Academic factors. The CBCL loaded most heavily on the Acting Out and Withdrawn factors and to a lesser degree on the Social Relations and Academic factors. Either of these two tests, then, would be helpful in the assessment of children's real-world behavior.

It is important that a clinician be aware of precisely what the instruments he has chosen to administer are measuring. Currently, it is common practice to give multiple behavioral rating checklists without considering possible redundancy and impurity. Our study uncovered common factors within the PIC, CBCL, and CPRS. However, while integrating the three instruments, we found that they were not as consistent as one would hope. A greater understanding of the true meaning of these behavior-rating scales can only be beneficial to clinicians.

References

Achenbach, T. M. (1992). Manual for the Child Behavior Checklist/ 2-3 and 1992 Profile. Burlington, VT: University of Vermont Department of Psychiatry.

Jensen, V.K., Larrieu, J.A., & Mack, K.K. (1997). Differential diagnosis between attention-deficit/hyperactivity disorder and pervasive developmental disorder—not otherwise specified. Clinical Pediatrics, 36(10), 555-561.

Trites, R.L. & Laprade, K. (1983). Evidence for an independent syndrome of hyperactivity. Journal of Child Psychology & Psychiatry & Allied Disciplines, 24(4), 573-586.

Wirt, R.D., Lachar, D., Klinedinst, J.K., & Seat, P.D. (1990). Multidimensional description of child personality: A manual for the Personality Inventory for Children. Los Angeles, CA: Western Psychological Services.

Table 1. Factor Analysis of Selected Parent Behavioral Reports

Scales	Component				
	1- Acting Out	2- Withdrawn	3- Social Relations	4- Academic	5- Fidgetiness & Physical Discomfort
PIC-Undisciplined/ Poor Self-Control	.854				
CBCL- Delinquent Behavior	.853				
PIC-Delinquency	.819				
CBCL- Aggressive Behavior	.801				
CPRS- Conduct Problems	.784				
PIC-Hyperactivity	.697				
CBCL- Externalization	.688				
PIC- Adjustment	.640				
CPRS- Hyperactivity	.548				
CBCL- Activities	-.431				
PIC- Family Relations	.387				
CBCL- Internalization		.876			
CBCL- Anxiety/ Depression		.875			
PIC- Internalization/ Somatic Symptoms		.791			
CBCL- Thought Problems		.789			
CBCL- Attention Problems		.675			
CBCL- Withdrawn		.647			
PIC- Anxiety		.622			
CBCL- Somatic Complaints		.602			
PIC- Somatic		.595			
PIC- Defensiveness		-.500			
PIC- Social Incompetence			.930		
PIC- Social Skills			.799		
PIC- Withdrawal			.793		
PIC- Psychosis			.704		
PIC- Depression			.676		
CBCL- Social			-.659		
CBCL- Social Problems			.501		
CPRS- Anxiety			.499		
PIC- Development				.887	
PIC- Cognitive Development				.786	
PIC- Achievement				.779	
CPRS- Learning Problem				.747	
CBCL- School				-.747	
PIC- Intellectual Screening				.653	
CPRS- Psychosomatic					.729
CPRS- Impulsive-Hyperactivity					.614

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title:	An Examination of the Constructs Measured by Parent Behavioral Reports
Author(s):	Selden, JJ, Pospisil, TS, Devaraju-Backhaus, S, Bradley, J, Michael, DJ & Golden, CJ
Corporate Source:	Publication Date: 8/01

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, ***Resources in Education*** (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to each document.

If permission is granted to reproduce and disseminate the identified documents, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Jennifer Selden

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1 ☑

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) *and* paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A ☐

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B ☐

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate these documents as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, please

Signature: Jennifer Selden, MS	Printed Name/Position/Title: Jennifer Selden doctoral candidate, MS	
Organization/Address: Nova Southeastern University Ft. Lauderdale, FL	Telephone: 954 382 0598	FAX: N/A
	E-Mail Address: JJselden2@aol.com	Date: 12/18/01

APA '01

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of these documents from another source, please provide the following information regarding the availability of these documents. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

ERIC Counseling & Student Services
University of North Carolina at Greensboro
201 Ferguson Building
PO Box 26171
Greensboro, NC 27402-6171